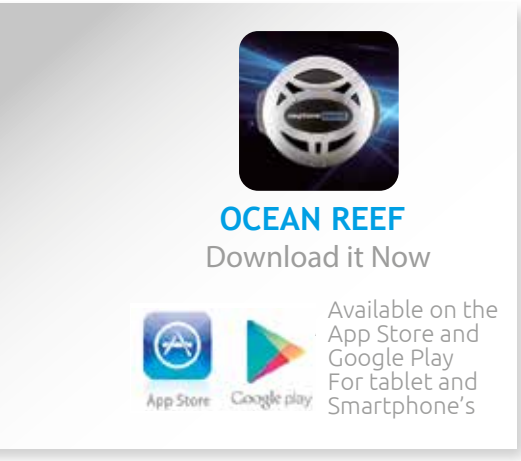
OCEANREEF®
connecting divers
2015



OCEANREEF®
connecting divers

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OCEAN REEF has more than 60 years of experience molding rubber goods and working in several different markets:

- Fashionable rubber, silicone, plastic, & multi-compound watch components
- Military protection equipment
- Respiratory PPE
- Molding of silicone, liquid silicone, rubber, plastic, and thermoplastic goods
- Engineering and manufacturing of molds for rubber/silicone plastic and thermo rubber Full face masks and underwater communication systems for diving application.

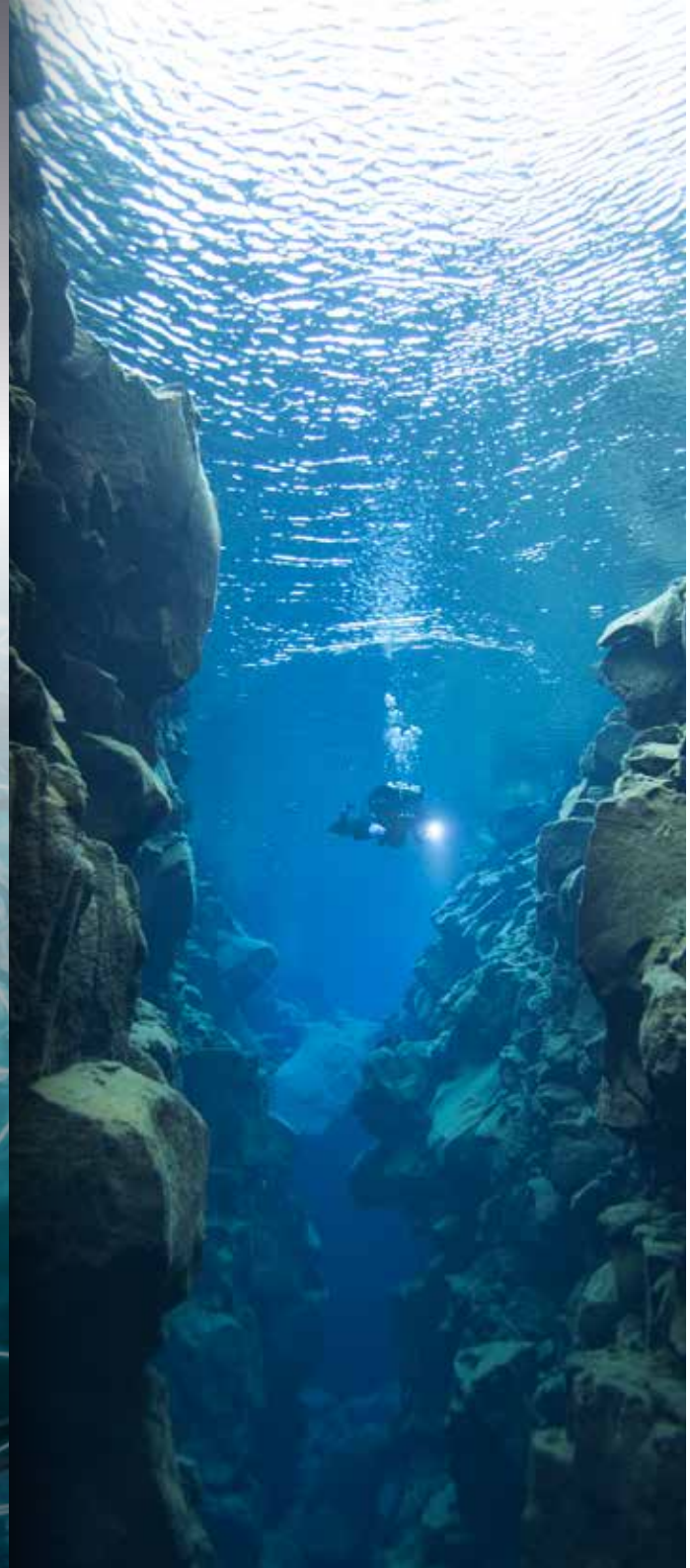
watch the video

The OCEAN REEF Group factories are in Genoa, Italy (Mestel Safety S.r.L - 50,000 sq. ft.) and San Diego, California, USA (OCEAN REEF Inc.- 6,000 sq. ft.) 'MESTEL Safety SrL is an ISO 9001-2000 certified company and also a NATO classified supplier.

The production facility includes injection and compression presses, electronic components assembly, finished goods assembly, and testing department. The R&D includes a sophisticated rubber/silicone compounds testing laboratory, an advanced computerized self-contained breathing monitor apparatus, a 32,000 liter pool with computerized ultrasonic underwater communication control system, closed circuit audio/video for demonstration and training, and two Pro E working stations for product engineering and mold design.

In collaboration with TRIBORD

THE INTEGRATED DIVING MASKS



During more than 60 years of involvement in the diving industry, OCEAN REEF has learned the importance of professional and commercial diving in the industry. Whatever the type of diving, most commercial and professional divers require a high-tech, durable, efficient, safe, and comfortable diving system. OCEAN REEF has developed a full face mask (integrated diving mask and regulator, or IDM) with underwater communications; a system that easily accomplishes all requirements for such demanding conditions and embraces different worlds to give divers the best solution to all their needs.

The IDM system is not just a full-face mask. It's an aggregation of diving components, combining the number one FFM with a whole worldwide range of accessories and features that could only be dreamt to be integrated in one's mask.

OCEAN REEF's revolutionary IDM's are the product of intense research and valuable experience acquired in the development and production of military protection equipment. The surface-based versions of our full-face mask have received international approval for use in the civil sector and have been adopted by specialized departments in numerous military and defense organizations for use in Nuclear, Biological, and Chemical (NBC) operations. From the Gulf Wars/Homeland security program to Antarctic expeditions, from military use to space exploration, from commercial to recreational activities, the Full Face Mask Project, which started in 1985, and involved over 50 different types of masks, has experienced a diverse range of conditions and applications, with the goal to achieve the best underwater product possible. A product that, dedicated entirely to the underwater world, could use the perfect seal that our gas masks obviously have to assure. With the development of the IDM masks for underwater use, OCEAN REEF is now recognized worldwide as —THE FULL FACE MASK COMPANY, wherever you dive.

We are proudly made in the US and made in ITALY manufacturers.

WHY DIVE AN OCEAN REEF IDM

Jaw fatigue 1

- Nothing to **bite** on.
- Frees mouth to **communicate**, drink.
- Enables **nose breathing**.

Fogging 2

- **No** product treatment needed
- **No fogging** thanks to the air circulation system.

Mask pressure equalization 3

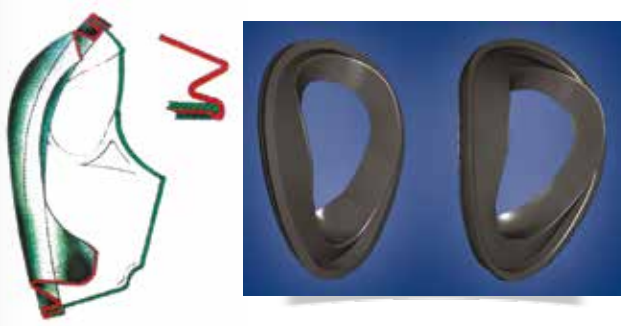
- Breathing apparatus integrated into the mask means **automatic pressure equalization** at each inspiration.

Flooding 4

- Face seal as explained later.
- Breathing inside the mask **automatically purges** water through the draining/ exhalation valve **if** water were to be inside the mask for any reason. When voluntarily flooding the mask, a couple purges of the second stage button completely clear the water from the mask.

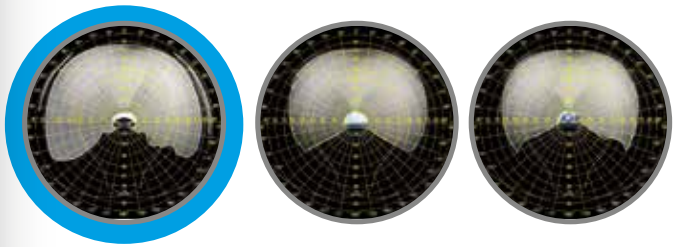
WHY DIVE AN OCEAN REEF IDM

watch the video



Face Seal

- **Patented** bellows double "S", "spring profile", skirt.
- **Larger** sealing surface.
- More comfort thanks to the "**floating effect**" on the face.
- Available in **2 sizes.**
- Seal capability derived from gas mask applications (CBRN tests) – the hardest test possible a face seal has to withstand.



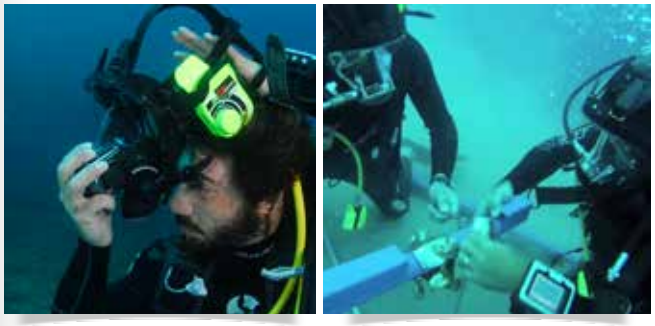
Space IDM | Aga Interspiro | Guardian

Field of Vision

- **Larger** field of vision than competitors (italcert Certification PPE-05 Rif 1332/05).
- Visible light transfer of the visor is 92%, **meaning a clearer view**.
- Designed **wider** and sits **closer** to the face than other visors, giving a broader field of vision and less volume buoyancy.

Durability and scratch resistance

- Transparent polycarbonate visor **made in Italy**.
- **Both sides are** coated in siloxane resin **for improved scratch and chemical resistance**.
- Impact resistance tested by **STANAG 4296** standards: impact of a steel ball traveling at 540 kph (335 mph).



Head harness and Fast Rotating Buckle II

- Head harness attached to the face shield **not on the skirt** meaning no tearing and much better resistance to tugging.
- **Six straps** meaning no risk of losing reg if unconscious (much greater chance of surviving such an event) or violently hit.
- **Wide** strap tips for easy grasping.
- **Fast rotating buckle system** (different configurations per model) for comfortable and quick doffing and donning on the surface and secure, fast operations during underwater bail out or wearing.

WHY DIVE AN OCEAN REEF IDM

3D Equalization System 1

- **Patented design.**
- **3 way** directional adjustment system: up/down, wide/narrow, close/far. Made for maximum comfort and nose breathing.
- **Pushing** the mask towards the face when needed causes the plugs to create a nasal seal.

Surface air valve 2

- **Easy to grab**, sturdy design.
- **Large** air vents.
- Allows IDM divers to breath ambient air when at the surface, **without** having to take off the mask.

Air Circulation 3

- Air circulation is achieved with an orinasal pocket so that CO2 build-up is **not mixed with fresh air**.
- **One-way circulation** keeps mask clear.

Directional Exhaust & Draining Valve 4

- Large, **one way** valves drain any water and air in the mask during exhalation.
- Purging the regulator will drain water even faster.
- Directional exhaust valve **orients the bubbles** away from the communication unit for better intelligibility. Position options are left, right, both sides and closed.

Regulator Characteristics

- Pneumatically **balanced** second stage provides consistent ease of breath at any tank pressure.
- **Adjustment knob** provides the diver with the requested amount of air flow under all circumstances.
- **Dive/pre dive lever** (Venturi) helps avoid surface free flow in harsh conditions.
- **CE certification** in accordance with 89/686/CEE directives under UNI EN250 standard rules for underwater activities.
- CE certification includes **low temperatures (<50°F or <10°C)**.

SL35TX INT first stage (code 9922)

- The IDMs are **CE certified** with this, high performance and balanced diaphragm first stage with anti-freeze kit.
- **Adjustable** intermediate pressure.
- Made of **chrome** plated **brass,** with a **stainless steel** piston and spring, and a **Teflon** seat.
- Standard yoke connection **232 bar (3364 Psi)**.
- 2 high-pressure ports 7/16-20 UNF.
- Flow rate of approx. **4800 l/m** at 140 bar.

SL35TX DIN (code 9923)

- **Same** features as previous.
- Screw connection at **300 bar (4500 Psi).**

SL35TX Nitrox M26x2 (code OR009927)

- **Same** as previous.
- Threading in accordance with **Euro rules**.
- **Viton** O-rings and **Christo lube** grease.
- **Compatible with Nitrox mixes up to 100%.**

Packaging may vary in accordance to model (Tdivers)

1. **Padded** zipper bag designed to hold your underwater equipment (mask, communication, first stage).
2. 1st stage **LP hose.**
3. Visor **protection.**
4. User's **manual.**
5. Screw driver.
6. Equalization extensions **3 two pieces sets** (6,10, 14 mm).
7. IDM diver **registration card** and **Limited Lifetime Warranty**.

IDM INTEGRATED DIVING MASKS

SPACE
IDM SUITED FOR THE NEEDS OF **PROFESSIONALS, INSTRUCTORS, EXPERT DIVERS, COMMERCIAL DIVERS**.

PREDATOR
IDM DESIGNED FOR THE **TOP NOTCH DIVERS: PROS, COMMERCIAL, MILITARY.**

RAPTOR
IDM SPECIFICALLY DESIGNED FOR **HIGH PERCENTAGE OXYGEN USE.**

IRON
IDM FOR **HIGH END COMMERCIAL DIVERS. OIL RIG DIVING, HAZARDOUS ENVIRONMENT DIVING.**

IDM SUITED FOR THE NEEDS OF PROFESSIONALS, INSTRUCTORS, EXPERT DIVERS, COMMERCIAL DIVERS.

Space

The most popular mask within Civil Protection, Police Departments, Dive Instructors, an all-around top performer.

- **Lightweight**, only 860 g (1.89 lb.).
- **Reduced buoyancy** of 400 g (0.89 lb.).
- Available in **3 different colors (black, yellow, orange).**

Black	Small/Medium	33372
	Medium/Large	33373
Orange	Medium/Large	OR025019
Yellow	Medium/Large	33378

IDM SPECIFICALLY DESIGNED FOR HIGH PERCENTAGE OXYGEN USE

Raptor

Black	Small/Medium	OR025001
	Medium/Large	OR025002

Specifically designed for long lasting dives and all those applications where high percentage of Oxygen in gas mixes is needed.

- **Viton** O-rings.
- **Christolube** grease.
- **100% pure oxygen use compatible mask.**
- **Black** ixef polymer reg cover.

IDM DESIGNED FOR THE TOP NOTCH DIVERS: PROS, COMMERCIAL, MILITARY.

Predator

Black	Small/Medium	33368
	Medium/Large	33369

The Predator is our Top Notch IDM mask. Commercial divers' best choice, Special Corps Mask of choice, a mask that can withstand the toughest and most frequent use possible.

- **Regulator cover** in marine-use Anodized Anticorodal®, light weight resistant, durable aluminum.
- Reg **adjustment knob, internal screw**, in AISI 316 stainless steel.
- AISI 316 stainless steel **frame and buckles**.
- Sensitive reg adjustment knob, sturdy and easy to grab even wearing thick gloves.
- **Glacier strap**: HNBR rubber made head strap, designed to maintain high elasticity when exposed to very low temperatures.
- 1030 g total **mask weight** (2.28 lb.).
- Heavily **reduced positive buoyancy**, 232 g (0.5 lb.).

IDM FOR COMMERCIAL DIVERS.
OIL RIG DIVING, HAZARDOUS
ENVIRONMENT DIVING.

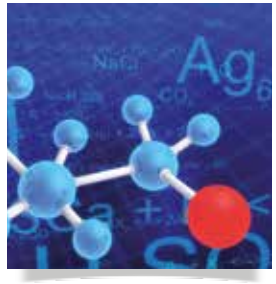
watch the video

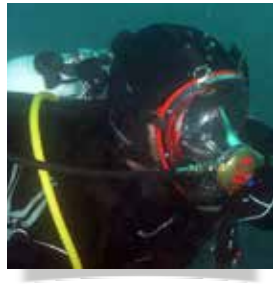
ironmask

Red | Medium/large | OR025021

The Iron mask is a Chem Haz mask. There's nothing sweet and cuddly about this bad boy. Made to be used in the worst environments possible, this IDM can manage a high percentage of Hydrocarbons in any water environment.

- **Regulator cover** in marine-use Anodized Anticorodal®, light weight resistant, durable aluminum.
- Reg adjustment knob, internal screw, in AISI 316 stainless steel.
- AISI 316 stainless steel **frame and buckles**.
- Sensitive reg adjustment knob, sturdy and easy to grab even wearing thick gloves.
- **Glacier strap**: HNBR rubber made head strap, designed to maintain high elasticity when exposed to very low temperatures.
- 1090 g total **mask weight** (2.40 lb.).
- **Heavily reduced positive buoyancy**, 172 g (0.40 lb.).
- FVMQ rubber Face Seal, Inhalation Diaphragm, Exhalation Valve, Purge button: **specific rubber made to withstand exposure to highly contaminated water**.





Visor Lights pre/assembled on Predator mask	black	medium/large	OR025006
Visor Lights pre/assembled on Space mask	black	medium/large	OR025005
Visor lights, pre assembled on any mask (mask sold separately)			OR024502
Visor lights (applicable on any mask)			33380

watch the video

Visor lights - integrated head light

- **6 powerful LED lights**.
- **Switch does not exclude SAV** (surface air valve).
- **75-lumen** output/LED.
- **100,000-hour** light life.
- **12-degree** beam angle.
- Light color TYP 5,500 – MAX 10,000 Kº.
- **3 hour burn time**, depending on the type of rechargeable battery.
- **Waterproof to 80 m** (260 ft.).
- Rechargeable CR 123 3v lithium battery included.
- Battery charger.

NOTE: though these lights are powerful, using them as a primary light source is not recommended.

Visor Lights are available pre-assembled on a newly ordered mask (on demand) or may be applied on any IDM, using prepared adhesive tape or factory mounting (hole drilling) at customer's preference.

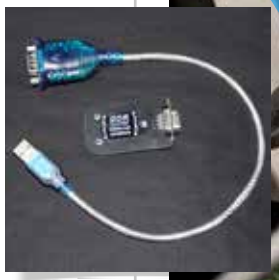
DDR (Dive Data Recorder) (code OR033141)

- **Compact, lightweight**, no-screen recorder.
- Helps to keep track of **maintenance** for your OCEAN REEF IDM on which it is installed.
- **Keeps track of**: number of dives, type of dives, depth reached, water temperature and other data.
- Also **ideal for schools or teams** to keep track of a mask with multiple users.

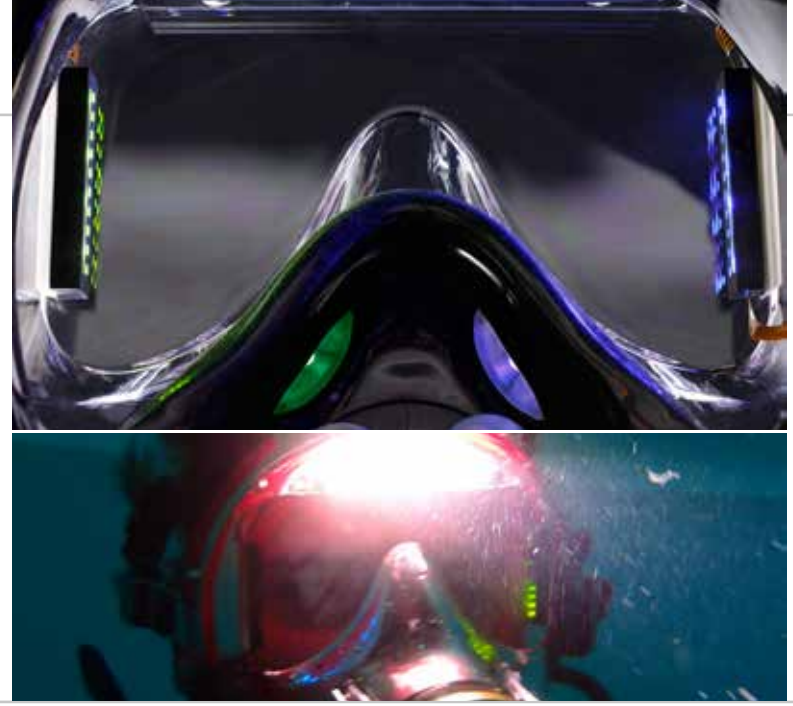
Technical characteristics

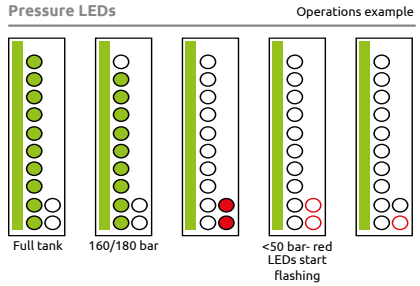
- Activation: depth of 3 ft. water contact. Deactivates after about 3 minutes above 3 ft. Threshold and end timer are user-configurable.
- Sampling Interval: 10 seconds. User-configurable from 1 s to over 18 hrs. Capacity changes with interval (e.g. 1,500 hrs @ 10 s., 150 hrs @ 1 s.).
- Capacity: Approx. 1,500 hours of data profiles (depth & temperature). Based on standard 10 second sample interval.
- Working Limits: Depth, 500 ft. Temperature, -20º C to +40º C.
- Software selectable view of measurement (meters or feet) and degrees (C or F).
- Downloading: Via exposed metal pads on case. Connects with universal download unit. Downloads to desktop, laptop, or Palm computers for profile analysis and logging.
- Size: 1.65" x 1.26" x 0.75" (42 x 32 x 19 mm)
- Lifetime up to 10 years, permanent lithium cell.
- Identification: Individually serialized both physically and electronically. Allows tracking of several devices on one computer.
- Super precise (resolves to 0.5 inches, accurate to 1 feet; resolves to 0.01 °C, accurate to 0.8 °C).
- The DDR has been developed in partnership with ReefNet Inc – Canada.
- The DDR is pre assembled (on a new mask), or assembled in factory if purchased separately. We do not sell as stand-alone piece.

DDR recorder interface with USB cable (code OR033142)



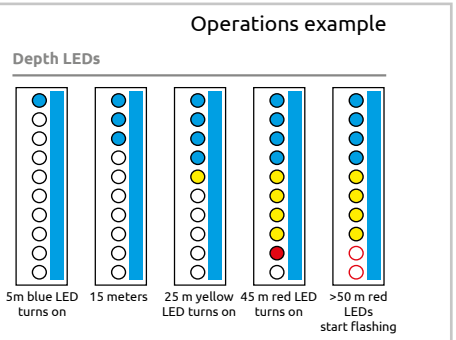
- Sold separately so that you can own more than one DDR and just one interface to use with them all.
- Uses an internet downloadable software (available for **free** at **www.oceanreefgroup.com/techservice.html**
- Compatible with PC; MAC, Linux, Palm, Pocket PC etc.
- Easy to use software.
- Connects to your computer where you will then be able to see logbook-style dive summary including, but not limited to: bottom time, surface interval, average and max temperature, depths, ascent rate. It is also possible to calculate your SAC by entering your tank pressure.
- All data can be exported.





Pressure

GREEN LEDs	RED LEDs
>201 bar	
181-200 bar	
161-180 bar	
141-160 bar	
121-140 bar	
101-120 bar	
81-100 bar	
60-80 bar	
>50 bar	30-60 bar (30-50 bar flashes)
>50 bar	<60 bar (<50 bar flashes)


Operations example
Depth LEDs
5m blue LED turns on
15 meters
25 m yellow LED turns on
45 m red LED turns on
>50 m red LEDs start flashing

Depth	BLUE LEDs	YELLOW LEDs	RED LEDs
3 - 5m			
6 - 10m			
15m			
20m			
25m			
30m			
35m			
40m			
45m			
50m			

SDVL (Shield Display & Visor LIght)

SDVL mounted on a PREDATOR m/l black	OR025010
SDVL mounted on a SPACE m/l black	OR025008
SDVL mounted on any other mask (mask sold separately)	OR025004

Technical characteristics

- Powered by 9.6 volts 4000mA ni-mh battery.
- Autonomy (with 60% of the side LEDs turned on) 48 hours.
- Low battery autonomy (after alarm starts) 30 min (starts Under 6.2 volt).
- Depth/pressure tolerance 2.5m.
- Depth sensor - max pressure 10 bar.
- HP Air pressure sensor max applicable pressure 400 bar.
- Start up Automatic (wet contacts).
- Turn off Automatic.
- Multiple alarms: Low battery - Depth > 50 mt/165 feet - Out of air.
- Weight of main unit (outside of the water) 1.5kg.
- HP hose.
- Charger 100/250v 16v 50-60 Hz -max 150mA 25W.
- Includes **Visor lights as shown on page16.**
- Black Anodized Anticorodal main battery unit, with security valve and 2 seal o-rings.

- Designed for an **extra degree of safety.**
- **Depth and Tank pressure heads up display with integrated Visor Lights** for divers who have both their hands busy most of the time, or for those who want visual alarms.
- Main unit fitted for tank hanging on the tank, screw/unscrew cylinder battery.
- High-pressure hose to 1st stage.
- Double PTT button unit to control shield display brightness, switch for shield display and visor lights on/off switch.
- **Shield display warnings and levels are as shown in the pictures**.

watch the video

H08 Helmet

- Designed for diving in serious conditions, where possible danger calls for total head protection (shark diving, cave diving, wreck diving).
- Equipped with 2 ear slots for the **GSM G-Power SL** comm. unit.

- **Specifically** designed for Ocean Reef 's IDMs.
- Available in **4 sizes** and **2 colors** (black rubber and silver).
- **Patented design.**
- Extremely **lightweight**.
- Made of a **2mm thick shatterproof plastic shell**.
- Molded **soft foam lining** inside for another comfortable, layer of impact-absorption.
- Lining molded from **closed non-absorbent** foam and designed for rapid **drainage**.
- **Soft lycra** edge to prevent neck rash.
- Withstands **years** of saltwater exposure.
- Secured with **nylon webbing**.
- Comes with a **carrying bag.**

Black rubber	Medium	OR23099
	Large	OR23100
	X-Large	OR23101
	XX-Large	OR23102
Silver	Medium	OR23104
	Large	OR23105
	X-Large	OR23106
	XX-Large	OR23107

Drinking device

- Device for drinking underwater

- A valve on the drinking device tube allows the diver to **control the flow** of liquid through the device.
- The drinking device kit must be assembled by an **authorized** OCEAN REEF Service Center.
- Internal **silicone rotating straw**.
- Neptune water pouch: **1 L (.26 gal).**

Drinking device kit only (code 33080)
Drinking device kit & mask assembly (code 33081)
Neptune water pouch, 1 L (.26 gal) (code 33082)

Use of the drinking device is strictly limited to commercial and expert certified divers.

Lens support (code 33299)

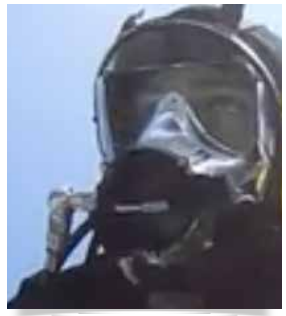
- **Designed** for use with any of the IDMs.

- **Lightweight, durable.**
- **Easy** to place and remove.
- Ability to share a mask to anyone by just **removing** your lenses.

Glacier Strap (code OR002902)

- Designed specifically for use also in **low temperatures,** as low as **-10°C** (outside air temperature).

- Made in **HNBR** rubber.
- Highly **resistant to chemicals** and solvents too.



Swivel connection (code 33033)

- Allows free movement and streamlined configuration.

- **Chromium plated brass.**
- Can be used with quick connection.

Dual tank valve (code 33049)

- Allows connection of the second stage directly to **two gas sources** (mix, side mounting, pony bottle).

- Allows a diver to alternate between sources, thanks to the switch, **without removing the mask**.

Standard 9/16" to Quick Connect adapter (code OR024995)

- Turns a standard hose into **quick connect hose.**

- **Chromium plated brass.**

Extraflex Quick Connect hose (800mm, 32 inch) (code OR024998) / QCH yellow (1200mm,47 inch) (code OR024997)/ Commercial QCH (code OR024996)

- **Four layer technology**, inner layer non-toxic polyurethane blend.
- Polyester first layer **reinforcement, thermo rubber** jacket.
- Polyethylene **anti-scratching** reinforcement.

- Commercial & professional hose **requires two hands to disconnect**.
- Characteristics same as the previous.

WIRELESS COMMUNICATION

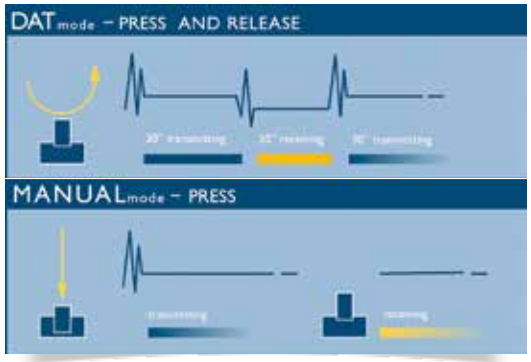
GSM DC (code 33122)

- A professional use comm. unit. Powerful, clear and multichannel communication.

- Transceiver unit.
- **DSP** microprocessor digital driver for **verbal message equalization**.
- **Automatic DAT system** for hands-free communication.
- **2 transceiver channels**.
- **2 buttons** for PTT transmission, channel switching and DAT activation.

- Activating the DAT starts a 30 – 20 – 30 second cycle during which the unit will be in 1) transmission mode 2) receiving mode 3) transmission again. This way, the diver has the possibility of **working with both hands** free and still communicating. The DAT cycle will continue unless turned off – this can be helpful in worst case scenario **emergencies** when the diver is in extreme distress and wants to send out a continuous message of his presence (transmission will signal to receiving units even if no words are spoken).
- DAT system is an Ocean Reef **exclusive**.

watch the video



WIRELESS COMMUNICATION

GSM G-Power (code OR033124)

- Extra **powered range** of 500mt (1500 ft.).

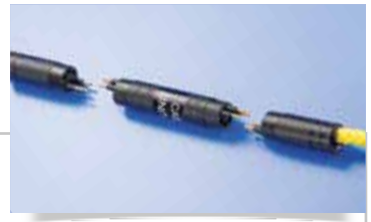
- **Transceiver** PTT(push to talk) unit.
- **External rubber treatment** reduces micro bubble adhesion.
- **Autonomy** of approximately 25h in standby mode.
- **Single** channel frequency (compatible with all units from OR and competitor units if using this frequency).
- Allows the diver to **adjust speaker volume** with second button.

GSM G-Power SL (code OR033125)

- Designed for **use with hoods** or OCEAN REEF **H08 helmet**.

- **Same features** as the G-power unit.
- Includes a pair of **waterproof headphones (MHA-2)** that plug into the main unit with **waterproof connectors.**
- Includes a **stainless steel clip** to attach the main unit to BC.

GC 2008 (code OR006509)



- This is a great tool that **creates multiple options** for professional communication alternatives.

- **Water proof** connectors.
- **Connects MHA-2 (headset) unit to ALPHA PRO X DIVERS surface unit while underwater, changing from a G-power SL configuration to a hard wire comm.**
- This unit also connects the MHA-2 unit to the UWCP (under water cell phone) unit. Learn more on page 32.

Example of configuration or using GC 2008

or

GC 2010 (code OR006519)

- The GC 2010 acts **like the GC 2008**, as an adapter between MHA-2 and hardwire communication units.
- The difference is that the GC 2010 permits the **simultaneous** use of both wireless and hard wire communication, without having to change from one to another.

- By using the PTT communication is possible **with both wireless receiving units and hardwired connected surface units**. Without pressing the PTT, communication will be full duplex, **hardwired only**.
- Receiving will **always be activated** for both wireless and hardwired (if connected).

HARDWIRED COMMUNICATION

ALPHA PRO X DIVERS (code OR033132) INCLUDES: UW UNIT + SURFACE UNIT + PROFESSIONAL 50 m CABLE

- This communication unit is specifically designed to meet the needs of professional and commercial divers that cannot compromise on a full duplex, hands free, super clear communication system. Cable communication is still unequaled in quality, while needing a hard connection diver to surface.

ALPHA PRO X-DIVERS	110/220V	OR033132
ALPHA PRO X-DIVERS - surface unit only	110/220v	OR033133
ALPHA PRO X-DIVERS prof cable	50 meters	OR033134
ALPHA PRO X-DIVERS UW unit (w/PTT)		OR033135

watch the video

Underwater Unit

- This unit can be sold separately, **but is designed to be used specifically** with the ALPHA PRO X DIVERS SURFACE UNIT.
- The unit itself is a **hardwired** comm. unit.
- **Clarity** of communication is outstanding.
- Range depends on cable length.
- Includes **recall button**.
- Speaker and microphone as **featured in all comm. units**.

Surface Unit

- Hardwired, full duplex surface unit for underwater communications.
- **2 ports for 2 communication cables**.
- On/off and volume adjustment switches.
- Microphone.
- **Switch for communication** between surface & diver 1, surface & diver 2, surface & diver 1 & diver 2.
- **Headset** port (headset optional).
- **External** 12v power port (cable optional).
- Battery charger port.
- Audio/video **recall**.
- **Incorporated** speaker.
- 12V **rechargeable battery**.
- Underwater unit **volume adjustment** (for both divers).
- Stand-by autonomy: **24h**.

CABLES HARDWIRED COMMUNICATION

Professional Cable	yellow	per meter	8488
Water proof rubber connector 6 pins			OR005270
DIN connector to surface unit - ALPHA PRO X Divers			OR008616
Professional Cable 50 mt bag			8686
Professional Cable 75-100 mt bag			8687

Professional cable (50 meters -165 ft long) (can be sold separately). Includes yellow rope exterior – 10mm diameter and 4000-newton resistance. Available in any length with an optional bag.

Cable floater (code OR 015001)

- Useful accessory to keep audio/video cables **floating**.

- **3 pieces** per pack.
- Two Velcro straps keep floaters in position.

MULTI-FUNCTION COMMUNICATION

GSM CUBE³ (code OR033131)

- The most **versatile** unit possible.
- Capable of communicating in **three different ways**: wireless, hard wired, VHF.

- **It can be connected to the ALPHA PRO X DIVERS** surface unit for cable hardwired communication – full duplex, hands free communication.
- The unit is a **permanent wireless unit**. Always on receiving mode for any communication on channel 1 frequency.
- **PTT button** activates wireless transmission on channel 1.
- Six-pin **waterproof** connection permits connecting and detaching from cable communication while underwater.

GSM CUBE³ can be connected to a **separate unit in order to** interface with a VHF radio and permit radio communication while on the surface. For more information read page 32.

D-MIC

- This microphone is mounted on **ALL OCEAN REEF** communication units.

- A **hydrophobic membrane** permeable to air, but not to water, isolates electronics and keeps them dry.
- The membrane's **reduced thickness** limits any reduction of the vocal signal.
- This microphone can be used at practically **any depth**.

Damper (code OR023006)

- **Designed for short distance communication, or closed environment** communication (Such as pools), where distortion may be caused by excessive transmission strength.

- Made of **spongy material**, full of tiny air pockets, the Damper reduces transmission power by fitting on the UW units' antenna – making conversation intelligible again.

- The Damper can be mounted on **all our underwater wireless units**.

NACS – Neptune Adjustable Communication Support (code 033054)

- The NACS can be attached on the **left side** of the IDM frame, as shown, to hold your communication unit in place and over the ear.

- Another OCEAN REEF **patented feature**.
- **Adjustable in tilt** and **distance** it permits easy adjustment of the unit.
- **Does not impede easy donning and doffing** of the mask.

- Designed for **all our units**.

	GSM DC™	GSM G-Power	GSM G-Power SL	GSM CUBE	ALPHA PRO X DIVERS (U/W UNIT)	GSM G.divers	M101A G.divers
Code	33122	OR033124	OR033125	OR0033131	OR033135	OR033109	33107
Type	Wireless ultrasonic	Wireless ultrasonic	Wireless ultrasonic	Wireless/ hardwired	hardwired	Wireless ultrasonic	Wireless ultrasonic
Activation	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Transmission	PTT	PTT	PTT	PTT	full duplex	PTT	No
Receiving	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Speaker volume adjustment	No	Yes	Yes – separate headset	from the surface when hardwired	Yes from the surface	No	No
System type	H-SSB	H-SSB	H-SSB	H-SSB+cable	cable	H-SSB	H-SSB
Frequency	32.768 KHz ch. 2 41.000 KHz	32.768 KHz	32.768 KHz	32.768 KHz	-----	32.768 KHz	32.768 KHz
Working range (*)	200m/600 ft	500m/1500 ft	500m/1500 ft	200m/600 ft+ 250m cable	max 250m cable	200m/600 ft	No
Rated depth (**)	40m/120 ft	40m/120 ft	40m/120 ft	40m/120 ft	40m/120 ft	40m/120 ft	40m/120 ft
Powered by	9V alkaline	9V alkaline	9V alkaline	9v if wireless, no power needed if hardwired	no power needed	9v	9v
Autonomy (total)	9h	25h	25h	9h or depending on surface if hardwired	depending on surface unit	30h	30h
Low battery autonomy (after alarm starts)	1h	1h	1h	1,5h when wireless	depending on surface unit	1,5h	1,5h
Low battery alarm	1 beep/30 sec under 7.5V	1 beep/30 sec under 6.8V	1 beep/30 sec under 6.8V	w1 beep/30 sec under 6.8V	No	1 beep/30 sec under 6.8V	1 beep/30 sec under 6.8V
DAT™	Yes	No	No	No	No	No	No
Transmit/receive cycle	Yes, DAT™ mode-30 sec transmit-20 sec receive	No	No	No	No	No	No
Squelch	Automatic	Automatic	Automatic	Automatic	No	Automatic	Automatic
Weight with batteries	370g/12.9 oz	370g/12.9 oz	2.3kg/5 lbs	450g	400g	370g/12.9 oz	280g

(*) The operating distance is affected by obstacles, air bubbles, thermo-clines, temperature and salinity.

(**) Does not include other depth limits that may apply.

Comm units like GSM G-divers, or M101A that can be found in our recreational line are 100% COMPATIBLE with units in this catalogue.

100% COMPATIBLE

WIRELESS COMMUNICATION

M105 DIGITAL (code OR033126)

- **Surface to diver** unit.
- **Transceiver** unit.
- Allows communication with **any number** of divers wearing wireless comm units.

- **Direct** communication with PTT walkie-talkie.
- Uses 6V DC lead battery. Allows up to **48 hours of operation.**
- **Can be powered** with a 12V DC source.
- **Activated only** when the antenna is connected to the unit to prevent **unwanted loss of power**.
- **10mt (approx. 33ft.) transducer cable length**. Available in different lengths on request. Long cables may require amplifier mounting.

M105 DIGITAL DC (code OR033128)

- Surface operator can easily change from one channel to the other by pressing a button, distinguishing **two different lines of communication** if needed.

- **Same characteristics** as the M105 digital.
- Has the addition of a **second transceiver channel**.

Comes with:

- Headphone connection.
- Volume control.
- Speaker.
- Water resistant case pressure compensation valve.
- Battery charger.
- Easy to read LED battery tester which shows the power status of the battery.
- Transducer cable.
- Bag.
- Microphone.

Available accessories:

- Audio out cable. (code 8590).
- Headset. (code 8589).
- Tuner for >50 meters M105 Antenna. (code OR008609).
- Splitter for connecting 2 antennas with M105 or M105DC. (code OR023001).
- External power cable code 8594.

AUDIO / VIDEO

GAMMA 105 (code OR033107 NTSC; code OR033108 PAL)

- This is an **audio/video** surface unit. Integrates **wireless audio** and hardwired video.

- Ultrasonic surface communication unit: 10 m (33 ft) transducer cable, microphone, external power supply cable, audio port, headphone port, volume control, and loudspeaker.
- 7 inch 16:9 color LCD monitor, speaker, audio and video port, brightness and color controls.
- Video port for external video recorder or monitor.
- 12V battery.
- Battery charger connector.
- 12V battery charger.

- **CCD Micro Video Camera** with underwater housing and mounting bracket. Also sold separately.

- 50 m (165 ft) camera cable. Available length on request.

GAMMA ALPHA (code OR033104 NTSC; OR033105 PAL)

watch the video

- The Gamma Alpha is similar to the Gamma 105, but where the latter integrates a wireless M105 unit and video, the first integrates Alpha Pro X divers hardwired communication with video.

- Gamma Alpha can receive audio and video from two divers.

- 7 inch 16:9 color LCD monitor, brightness and color controls.
- On/Off and speaker volume adjustment switch.
- Speaker.
- Microphone.
- Switch for communication between surface & diver 1, surface & diver 2, surface & diver 1 & diver 2.
- Headset port (headset optional).
- Audio/video recall from divers.
- 12V rechargeable battery + battery charger.
- 2 plugs for audio connections to divers.
- 2 plugs for video connection to two divers.
- 3 video out plugs.
- Underwater unit volume adjustment (for both divers).
- Switch for the video: 2 positions to show the video of diver 1 or diver 2.
- External power charger, 12V (cable optional).
- Stand-by autonomy: 24h.

- 1 professional surface/diver cable (50 meters, 165 ft. long) (can be sold separately). (code OR033134)
- 1 underwater unit (alpha pro x divers uw unit) (can be sold separately). (code OR033135)

- 1 video cable (50 mt, 165 ft. long) (can be sold separately). (code OR008575)

- 1 CCD micro video camera (can be sold separately). (code OR008573 NTSC; code OR008574 PAL)

	M-105 Digital w/ battery tester	M-105 Digital DC w/ battery tester	ALPHA PRO X DIVERS (SURFACE)	GAMMA ALPHA	GAMMA 105	M100 G.divers
Code	OR033126	OR033128	OR033133	NTSC OR033104 PAL OR033105	NTSC OR033107 PAL OR033108	33165
Type	Wireless ultrasonic	Wireless ultrasonic	Hardwired	Hardwired+video	Wireless+video	wireless
Activation	Upon antenna connection/switch	Upon antenna connection/switch	switch	indipendant switches	indipendant switches	upon headset connection
Transmission	PTT	PTT	full duplex W/PTT	full duplex W/PTT	PTT	PTT
Receiving	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Speaker volume adjustment	Yes	Yes	Yes	Yes	Yes	Yes
System type	H-SSB	H-SSB	cable	cable	H-SSB	H-SSB
Frequency	32.768 KHz ---	32.768 KHz ch. 2 41.000 KHz	--- ---	--- ---	32.768 KHz upon request	32.768 KHz ---
Working range (*)	200m/600 ft	200m/600 ft	cable up to 250m	cable up to 250m	200m/600 ft	200m/600 ft
Powered by	Rechargeable 6V lead	Rechargeable 6V lead	Rechargeable 12V	Rechargeable 12V	Rechargeable 12V	9v (not included)
Autonomy (total)	48h	48h	24h	12h	12h	30h
Low battery autonomy (after alarm starts)	1.5h	1.5h	na	na	45min	1h
Low battery alarm	1 beep/30 sec under 4.8V	1 beep/30 sec under 4.8V	na	na	na	1 beep/30 sec under 6.8V
DAT™	No	No	na	na	na	na
Transmit/receive cycle	No	No	na	na	na	na
Squelch	Automatic	Automatic	na	na	Automatic	Automatic
Weight with batteries	2.3kg/5 lbs	2.3kg/5 lbs	2.3kg	5,8kg	5,6kg	760g

(*) The operating distance is affected by obstacles, air bubbles, thermo-clines, temperature and salinity.

M100 G-divers can be found in our recreational line.

100% COMPATIBLE

OCEANREEF

B2D - boat 2 diver
Key West underwater communication system (code OR023015)

What is the B2D Key West?

This brightly thought suit case holds all the needed to keep your submerged team of divers well under control, while controlling your budget too. A lot more affordable than military grade conventional recall systems, the B2D is transportable, lightweight, resistant and customizable.

Receiving units (M101A) can be worn on any conventional mask strap, or held between two or more divers for a group communication. These units can receive messages from the boat (M100) within a range of 650-820 ft.

The portable surface unit is easy to use - PTT transceiver, just like a VHF radio. The unit turns on when the headphones are inserted into the plug. Once the antenna is placed in the water, communication is possible.

Underwater units don't require training to be used and turn on when in the water.

SAFETY AND COMFORT ON BOARD AND IN THE WATER.

- WARN YOUR DIVERS OF HAZARDS OR WEATHER CHANGES.
- RECALL THE DIVERS TO THE BOAT.
- COMPLETE COMPATIBILITY WITH ALL THE OCEAN REEF PRODUCT RANGE.
- SUIT UP YOUR BOAT WITH A PROFESSIONAL, YET AFFORDABLE DIVER RECALL SET.

B2D - KEY WEST (code OR023015)

Comes with:

1 M100
- 10 m (33ft) transducer.
- Headphones.
- Operates on one channel and 9V batteries.

1 M101A
- Automatic activation in the water.
- Operates on 9V batteries.
- 30 hrs approximate operating time.
- Low battery alarm.

1 High impact, water proof suitcase.
- Yellow, for better recognition on the boat.
- Padded interior for easy fitting and secure handling.
- Low weight and ready for 2 more M101A units (extras sold separately).

LA project

advantages of uw communication on liveaboards

(code OR23016)

2 Space Integrated Diving Masks

1 M100 Portable surface com unit

2 M101A Receiving underwater comm units

1 M105 DC Surface 2 channel s transceiver unit

2 GSM DC double channel uw comm units

2 Quick Connection hoses

1 Sports bag

Communication = Safety, simple

watch the video

ALPHA UNDER WATER CELL PHONE (UWCP) (code OR033122)

UWCP is a unit that connects a diver to a surface cellular phone.
Its use is not limited to underwater phone calls, but to all that can be done, having the possibility to use this communication potential (long distance communication, cell phone utility potential).

- Can be installed on any IDM mask.
- 40m cable.
- Quick release waterproof cable connection that allows the diver to separate from the cable at any moment.
- Quick release connection bayonet to surface unit.
- Impact and water resistant surface unit.
- Custom made buoy.
- Water reserve pouch in the buoy for more stability.
- Diver flags.
- Bluetooth connection interface to connect your own cellular phone.
- Cellular phone with “voice dialing” required.
- Ask for more info.

watch the video

M101 AR (code 33130)

- A wireless receive only unit, **designed specifically to record underwater communication.**

- Plugs into the microphone port of your underwater camera to record audio conversation between divers/surface.
- Unit can be held on mask or attached to BC.

Customization

- Customizations are **endless** with OCEAN REEF products. From IDM’s to communication, we are committed to fulfilling the customer’s need.
- Please **contact us directly** for quotations and customized solutions to your needs, we will do our best to give you the widest and most complete range of services available through collaboration with our R&D dept.

GSM VHF (basic configuration code OR033123)

- **VHF** device connects to GSM CUBE unit.
- Dedicated specifically to **rescue teams**.
- Designed in collaboration with **Italian Red Cross**.

- Waterproof modified, radio-carrying bag. Holds a variety of radio models. Connectors must be custom made in factory for the chosen radio model. The radio can be attached to the BC.
- **PTT buttons allow channel selection and ability to activate communication without having to take the IDM off.**
- VHF communication can occur only on the surface with a range determined by the chosen radio device.
- Underwater wireless communication.
- VHF and underwater comm unit. Have separated power sources.
- Please ask for details.

NEPTUNE II MASK (code 33357 black small/medium; code 33001 medium/large; code 33012 yellow medium / large)

- For use with **conventional regulators.**

- 3 DIN ports, two of which are dedicated to fit adapters for conventional regulators (once mouthpiece is removed). Remaining port is ready to fit comm. unit.
- Directional exhaust valve.
- Easy Doffing system.

NEPTUNE SPACE 50/60 PSI (code 33366 small/medium; code 33367 medium/large)

These masks have the intermediate pressure of the regulator set up at 50/60 PSI allowing the use of the mask with an alternative surface air supply (hookah). Performance of the Neptune Space 50/60 regulator depends on the stability of intermediate pressure provided by the surface air line supply. The Neptune Space 50/60 PSI also includes a Limited Lifetime Warranty.

Conventional Regulator Adapter (code 33020 small; code 33021 medium)

- A special adapter **allows the connection of several kinds of regulators**. The adapter is available in two sizes, medium (standard) and small. This adapter fits in place of the surface air valve.

ACM – Air Control Module (customized)

- **Lightweight, portable** control box for surface air supply + communication (if requested) operations.

- If communication is requested, a ALPHA PRO X DIVERS unit is installed into the ACM (underwater units not included) permitting full duplex with max 2 divers. Cables will then run down with surface air supply cables.
- Depth Gauge/Pneumo Systems: Dual reading gauges continuously monitoring the diver's depths from 0-70m (0-230ft). Maximum recommended user depth: 40m, 130ft FSW.
- Depth Monitoring/Pneumo Knob is used to meter the flow of air used for depth measurement.
- The Stainless Steel Air Outlets fittings connect the diver's air supply hose to the ACM, providing a strong, reliable, corrosion resistant connection. Shut-off valves allow the isolation of one diver's air supply from the other.
- Regulator Adjustment Knob controls the air pressure delivered to the diver's umbilical. Variable pressure settings are obtainable.
- Selector Valve Handle is used to choose either one of the air supply cylinders. Individual cylinders may be changed out without interrupting the dive.
- High Pressure (HP) Supply Gauges directly monitor the pressure in each of the air supply cylinders.

watch the video

M105 Mixer (code OR006512)

This accessory allows for the connection between the M105 Digital/M105 Digital DC and an external amplifier or recorder. The Mixer takes its power directly from the M105 and does not need a separate battery. Audio output cables (Anodized Anticorodal®/RCA Connectors) are not included.

Custom Broadcasting/ Conference Call

Custom made systems for **underwater live broadcasting, conference calls, audio & video,** one way or 2-way communication (i.e. **Skype calls!**). Excellent for education, TV, shows, presentations, exploration etc.

Aquarium And Shows Installations

Custom made systems for wireless/hardwire communication between submerged personnel/ surface/ other. Connection to facility amplification for public interaction (i.e. Scripps Aquarium).

PREDATOR T DIVERS IDM (code OR030004)

- Designed **in collaboration with TEAM BLUE IMMERSION** members, Dahab technical specialized divers.

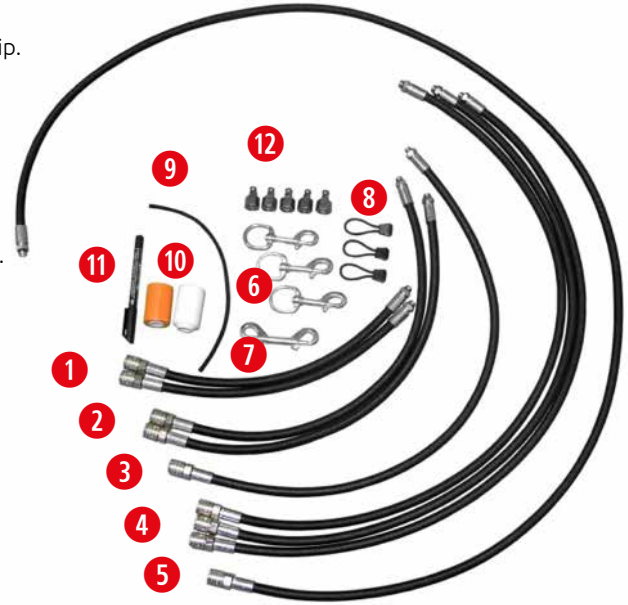
- Designed by technical divers for technical divers.
- Doesn't compromise on the sturdy traits of the top of the line **PREDATOR** IDM with stainless steel components.
- **O2 cleaned** like a RAPTOR IDM.
- **Newly designed** stainless quick releases.
- Streamlined, all **black** design.
- Double coated visor with **high impact resistance**.
- Adjustable flow **stainless steel** knob.
- Front cover made by IXEF-highly impact resistant.
- All Viton O-rings.
- **Stainless steel frame.**
- **Glacier strap** for low temperatures and **standard strap included**.
- **Protective padded bag.**
- **Limited lifetime warranty.**
- **Male Quick connection included.**

watch the video

T Divers Hose Pack (code OR030005)

1. 2 - 40cm hoses Anodized Anticorodal®/female quick connect.
2. 2 - 60cm hoses Anodized Anticorodal®/female quick connect.
3. 1 - 80cm hose Anodized Anticorodal®/female quick connect.
4. 3 - 100cm hoses Anodized Anticorodal®/female quick connect.
5. 1- 2 meters hose Anodized Anticorodal®/female quick connect.
6. 3 - Stainless Steel clips.
7. 1 - Double Stainless Steel clip.
8. 3 - Hose Retainers clips.
9. 1- 30cm Elastic rope.
10. 2 - Label Tapes (white and orange).
11. 1 - Label Pen.
12. 5- Male quick connect parts.

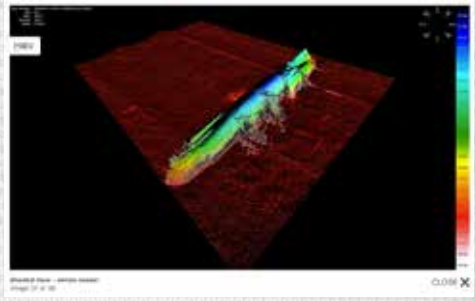
• Available separately.



Ocean Reef has created this pack in collaboration with Team Blue Immersion to meet the needs of IDM tech divers that want to move at any moment to different configurations (side mounting, back mounting). Thanks to quick connections, dual tank valve and the IDM, tech divers can switch gases easily and with a streamline, modifiable configuration. The different length hoses included are also designed so that divers with different body sizes can choose which one is more comfortable for them by switching them around. Quick connections on your hoses diminish the number of regs needed for a more comfortable dive. Also included all the material to: hang hoses and equipment on your BC's, label your cylinders – for the most streamlined configuration possible.

Here in the drawings are two configurations suggested by TBI.

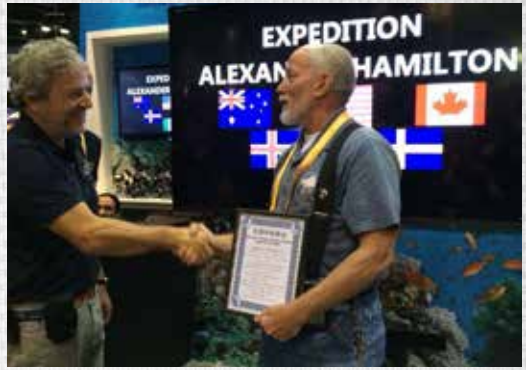
Yellow hoses are for spare second stage and red hoses for primary.



watch the video

Expedition Hamilton by OCEAN REEF

OCEAN REEF is a very proud sponsor of TBI's epic expedition to the WWII Alexander Hamilton wreck – an expedition dreamt and planned with years of sacrifice and dedication by highly specialized and trained technical divers who ultimately put their lives on the line to perform something not everybody's capable of accomplishing.
Team Blue Immersion teamed up with OCEAN REEF to again dive to the first American vessel that was torpedoed in the Atlantic Ocean during the Second World War, this time to attach a memorial plaque to the wreck and give a final farewell to the Cutter's devoted seamen who perished during the sinking.
At 95mt. deep, with no visibility, 5°C water, the Hamilton was not an easy dive. Planning had to be perfect, timing was crucial and the weather could close the only window the team had at any moment.
TBI divers ultimately managed a successful dive and attached the memorial plaque, earning the gratitude of the families who lost dear ones that day long ago – reminding us, once again, what the terrible cost for our freedom has been and what we can do to honor, everyday, that sacrifice.



Measuring Kit (code 33075)

- For determining mask size.
- Measuring tool (caliper).
- Full-face mask size recommendation chart.
- Measuring instructions

Nozzle Adjustment Tool (code 9754)

- An essential tool for every Ocean Reef Service Center -used to adjust the 2nd stage according to factory specs.

IDM Regulator Adapter (code 9794)

- This tool fits on a conventional test bench or may be used with a portable one. It is useful for technicians who set up and check Space mask regulators prior to mask assembly.

Portable Test Bench (code 9805)

- Portable test bench for OCEAN REEF IDM and conventional regulators.

IDM Tools (code 9799)

- Contains the tools required for servicing the IDM masks (in combination with the nozzle adjustment tool).

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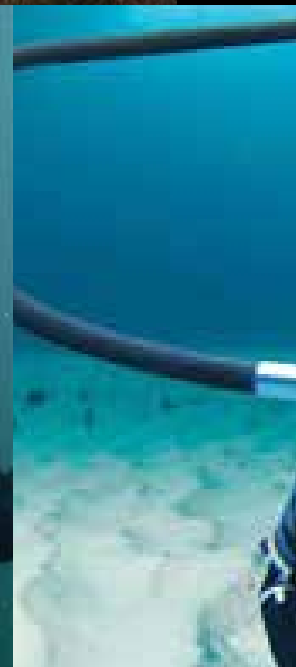
connecting divers



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WE ARE OCEAN REEF

We would like to thank all whom contributed with pictures to this Catalog:

ITC Hydroactive, UK
ITC Dive Friends Bonaire, Bonaire
ITC Il Grande Blu, Italy
ITC Zen Dive Resort, Bali
ITC Playa del Carmen, Mexico
ITC Team Blue Immersion Dahab
OCEAN REEF Thailand
ODE Sports (OCEAN REEF China)
Pleyades Diving Center Dive Persia

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